TAEP: FY 2017-18 Cattle Genetics Program - Beef EPD Requirements by Breed - 3 Options

TAEP Bulls must test negative for BVD-PI (test results required - see veterinarian with BSE & 840 EID)

EPDs have changed for this application period and must be current as of October 1, 2017.

Seedstock breeders are encouraged to print current bull pedigree once true NCE EPDs or Genomic Enhanced EPDs are posted on the breed association website and keep a copy for buyers.

Producers are encouraged to purchase registered bulls from reputable seedstock breeders who provide buyers with complete reimbursement documentation at time of purchase including bull type, receipt, 840 EID, BSE, negative BVD-PI test results and pedigree with current EPDs, accuracies, genomic status and performance data.

Eligible beef breeds for the TAEP Genetics program must have a national breed performance testing program that participates in a National Cattle Evaluation (NCE) program recognized by the Beef Improvement Federation. Genomic Enhanced or True NCE EPDs must be calculated and printed from the most prominent breed association.

All bull types must have true NCE EPDs with minimum 0.15 accuracy for the Calving Ease (CE or BW) and Growth (WW or YW) categories. True NCE EPDs are calculated on registered bulls after the performance and contemporary group data is submitted to the breed association and calculated through the National Cattle Evaluation (NCE). Interim EPDs, pedigree estimates, pedigree index (ie. I, I+, P, P+ or 0.05 Accuracy) or parental averages are not eligible for reimbursement.

• \$1,600 maximum cost-share reimbursement for bulls with eligible Genomic Enhanced EPDs.

Genomic Enhanced EPD verification **must be complete on pedigree** prior to reimbursement request to be eligible subject to the \$1,600 maximum.

• \$1,200 maximum cost-share reimbursement for bulls with eligible true NCE EPDs (0.15 min. Accuracy).

Bulls **must have true NCE EPDs with a minimum 0.15 accuracy complete on pedigree** prior to reimbursement request to be eligible subject to the \$1,200 maximum.

Payment may be denied if individual bulls do not have true NCE EPDs with a minimum 0.15 accuracy calculated by their breed association at time of sale catalog printing (or sale date for private treaty sales).

To Qualify: A bull must meet or exceed EPD requirements in each EPD category for 1 of the following 3 bull types.

Each bull type (Balanced, Terminal or Calving Ease) has different EPD requirements.

The 3 EPD categories are: Calving Ease (CE or BW), Growth (WW or YW) and Maternal (Milk range).

Balanced bulls must meet 3 of 3 EPD categories.

Terminal bulls must meet 2 of 2 EPD categories (Terminal bulls do not have a maternal requirement). Calving Ease bulls must meet 3 of 3 EPD categories.

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Balanced Bulls

TAEP Balanced bull type sires work well in small herds where producers expect one bull to sire optimal performance (more growth than Calving Ease bulls) when bred to 20 mature cows while maintaining adequate calving ease when bred to 3-5 heifers. Producers with limited time, pasture and facility resources could choose to either sell heifers at weaning or to enroll the top quality weaned heifers into a heifer development program. Producers raising their own replacement heifers are encouraged to AI breed heifers to high accuracy calving ease sires.

| | • CE or BW <u>and</u> WW or YW must meet or exceed minimum <u>0.15</u> Accuracy for all bull types • | | | | | | | |
|-------------------------------|--|------------|--------------|---------------------|--------|--------------|-------------|--|
| BALANCED Bulls | Must meet or exceed EPD requirements for: Calving ease and Growth and Maternal | | | | | | | |
| | 1.) CALVING EASE + | | 2.) GROWT | 2.) GROWTH + | | 3.) MATERNAL | | |
| (1st <u>bull type</u> option) | Minimum | Maximum | Minimum | Minimum | Minimu | m | Maximum | |
| <u>Breed</u> | CE (Acc.) or | BW (Acc.) | WW (Acc.) or | YW (Acc.) | MILK | | <u>MILK</u> | |
| Angus | 5 (.15) or | 2.8 (.15) | 46 (.15) or | 75 (.15) | 15 | to | 37 | |
| Akaushi | 3 (.15) or | -0.4 (.15) | 22 (.15) or | 43 (.15) | 26 | to | 36 | |
| Beefmaster | 2 (.15) or | 0.6 (.15) | 17 (.15) or | 33 (.15) | 7 | to | 14 | |
| Brahman | | 1.3 (.15) | 12 (.15) or | 20 (.15) | 1 | to | 11 | |
| Brangus (Black) | 3 (.15) or | 1.6 (.15) | 21 (.15) or | 37 (.15) | 5 | to | 18 | |
| Red Brangus | 3 (.15) or | 1.4 (.15) | 14 (.15) or | 18 (.15) | 5 | to | 15 | |
| Ultrablack | 3 (.15) or | 1.6 (.15) | 25 (.15) or | 49 (.15) | 5 | to | 17 | |
| Braunvieh | 5 (.15) or | 3.1 (.15) | 41 (.15) or | 61 (.15) | 26 | to | 46 | |
| Charolais | 4 (.15) or | 0.2 (.15) | 21 (.15) or | 35 (.15) | 3 | to | 23 | |
| Chiangus | 4 (.15) or | 2.8 (.15) | 37 (.15) or | 52 (.15) | 12 | to | 27 | |
| Gelbvieh | 8 (.15) or | 2.0 (.15) | 62 (.15) or | 80 (.15) | 19 | to | 42 | |
| Gelbvieh Balancer | 10 (.15) or | 1.2 (.15) | 60 (.15) or | 86 (.15) | 15 | to | 37 | |
| Hereford | 0.7 (.15) or | 3.8 (.15) | 47 (.15) or | 71 (.15) | 16 | to | 37 | |
| Black Hereford | | 3.1 (.15) | 42 (.15) or | 70 (.15) | 20 | to | 27 | |
| Limousin | 7 (.15) or | 2.2 (.15) | 59 (.15) or | 78 (.15) | 21 | to | 38 | |
| Lim-Flex | 9 (.15) or | 1.5 (.15) | 62 (.15) or | 90 (.15) | 20 | to | 36 | |
| Maine Anjou | 8 (.15) or | 1.3 (.15) | 43 (.15) or | 56 (.15) | 15 | to | 32 | |
| MaineTainer | 7 (.15) or | 1.3 (.15) | 41 (.15) or | 54 (.15) | 14 | to | 27 | |
| Murray Grey | -0.9 (.15) or | 4.5 (.15) | 20 (.15) or | 32 (.15) | 2 | to | 10 | |
| Red Angus | 3 (.15) or | -0.2 (.15) | 54 (.15) or | 75 (.15) | 14 | to | 31 | |
| Salers | -0.3 (.15) or | 2.8 (.15) | 28 (.15) or | 53 (.15) | 10 | to | 30 | |
| Santa Gertrudis | | -0.4 (.15) | -4 (.15) or | -4 (.15) | -3 | to | 9 | |
| Senepol | | 1.5 (.15) | 4 (.15) or | 6 (.15) | -3 | or | 15 | |
| Shorthorn | 7 (.15) or | 2.1 (.15) | 47 (.15) or | 51 (.15) | 10 | to | 28 | |
| Simmental | 8 (.15) or | 2.5 (.15) | 57 (.15) or | 77 (.15) | 13 | to | 33 | |
| SimGenetics | 9 (.15) or | 1.6 (.15) | 54 (.15) or | 76 (.15) | 12 | to | 33 | |
| South Devon | 0.2 (.15) or | 2.8 (.15) | 27 (.15) or | 55 (.15) | 11 | to | 33 | |
| Tarentaise | 0 (.15) or | 2.0 (.15) | -3 (.15) or | 3 (.15) | -4 | to | 9 | |

Terminal Bulls

TAEP Terminal bull type sires can be utilized by producers desiring to maximize performance (more growth than either Balanced or Calving Ease bulls) when bred to mature cows. *Not recommended to breed to heifers.*

| | • CE or BW and WW or YW must meet or exceed minimum 0.15 Accuracy for all bull types • | | | | | |
|-------------------------------|--|-----------|---------------------|-----------|-----------------|--|
| TERMINAL Bulls | Must meet or exceed EPD requirements for: Calving ease and Growth | | | | | |
| IERIVIIINAL DUIIS | 1.) CALVING I | EASE + | 2.) GROWTH + | | 3.) MATERNAL | |
| (2nd <u>bull type</u> option) | Minimum | Maximum | Minimum | Minimum | Minimum Maximum | |
| <u>Breed</u> | CE (Acc.) or | BW (Acc.) | WW (Acc.) or | YW (Acc.) | | |
| Angus | 0 (.15) or | 4.7 (.15) | 53 (.15) or | 93 (.15) | N/A | |
| Akaushi | 1 (.15) or | 3.1 (.15) | 26 (.15) or | 47 (.15) | N/A | |
| Beefmaster | 0 (.15) or | 2.0 (.15) | 25 (.15) or | 45 (.15) | N/A | |
| Brahman | | 2.9 (.15) | 19 (.15) or | 31 (.15) | N/A | |
| Brangus (Black) | 1 (.15) or | 3.0 (.15) | 28 (.15) or | 55 (.15) | N/A | |
| Red Brangus | 1 (.15) or | 2.4 (.15) | 18 (.15) or | 28 (.15) | N/A | |
| Ultrablack | 1 (.15) or | 3.0 (.15) | 35 (.15) or | 71 (.15) | N/A | |
| Braunvieh | 3 (.15) or | 5.1 (.15) | 46 (.15) or | 72 (.15) | N/A | |
| Charolais | -1 (.15) or | 2.7 (.15) | 29 (.15) or | 54 (.15) | N/A | |
| Chiangus | 1 (.15) or | 4.0 (.15) | 44 (.15) or | 65 (.15) | N/A | |
| Gelbvieh | 6 (.15) or | 3.7 (.15) | 70 (.15) or | 98 (.15) | N/A | |
| Gelbvieh Balancer | 8 (.15) or | 2.6 (.15) | 68 (.15) or | 103 (.15) | N/A | |
| Hereford | -1.2 (.15) or | 5.3 (.15) | 53 (.15) or | 86 (.15) | N/A | |
| Black Hereford | | 4.4 (.15) | 47 (.15) or | 78 (.15) | N/A | |
| Limousin | 3 (.15) or | 3.7 (.15) | 67 (.15) or | 96 (.15) | N/A | |
| Lim-Flex | 6 (.15) or | 2.7 (.15) | 69 (.15) or | 106 (.15) | N/A | |
| Maine Anjou | 4 (.15) or | 4.2 (.15) | 50 (.15) or | 67 (.15) | N/A | |
| MaineTainer | 3 (.15) or | 3.8 (.15) | 48 (.15) or | 65 (.15) | N/A | |
| Murray Grey | -2.0 (.15) or | 5.8 (.15) | 28 (.15) or | 43 (.15) | N/A | |
| Red Angus | 0 (.15) or | 1.5 (.15) | 62 (.15) or | 97 (.15) | N/A | |
| Salers | -1.1 (.15) or | 4.0 (.15) | 36 (.15) or | 70 (.15) | N/A | |
| Santa Gertrudis | | 1.0 (.15) | 1.0 (.15) or | 1.3 (.15) | N/A | |
| Senepol | | 2.5 (.15) | 11 (.15) or | 15 (.15) | N/A | |
| Shorthorn | 1 (.15) or | 4.7 (.15) | 55 (.15) or | 66 (.15) | N/A | |
| Simmental | 4 (.15) or | 4.4 (.15) | 65 (.15) or | 96 (.15) | N/A | |
| SimGenetics | 5 (.15) or | 3.6 (.15) | 63 (.15) or | 98 (.15) | N/A | |
| South Devon | -1.9 (.15) or | 4.9 (.15) | 38 (.15) or | 72 (.15) | N/A | |
| Tarentaise | -5 (.15) or | 4.7 (.15) | 9 (.15) or | 19 (.15) | N/A | |

Calving Ease Bulls

TAEP Calving Ease bull type sires are utilized to improve calving ease for breeding to 10-20 heifers while maintaining acceptable growth and maternal traits. Production example: Producer with good reproductive management and facilities decides to retain, purchase, or custom develop high quality heifers which are sired by registered bulls. Preventative health and stewardship best management practices, including estrus synchronization and artificial insemination to high accuracy calving ease sire, are applied during development. Heifers are then pastures exposed to high quality calving ease bulls. Bred heifers are kept, sold, or returned to owners after veterinary diagnosis of a minimum 90 day pregnancy.

| | • CE or BW <u>and</u> WW or YW must meet or exceed minimum <u>0.15</u> Accuracy for all bull types • | | | | | | |
|-------------------------------|--|------------------|--------------|--------------|---------|---------|-----------|
| CALVING EASE Bulls | Must meet or exceed EPD requirements for: Calving ease and Growth and Maternal | | | | | | |
| | 1.) CALVING EASE + 2.) GROWTH + | | | 3.) MATERNAL | | | |
| (3rd <u>bull type</u> option) | Minimum | Maximum | Minimum | Minimum | Minimur | n Maxim | ıum |
| <u>Breed</u> | CE (Acc.) or | <u>BW (Acc.)</u> | WW (Acc.) or | YW (Acc.) | MILK | MIL | <u>K_</u> |
| Angus | 9 (.15) or | 1.4 (.15) | 41 (.15) or | 70 (.15) | 15 | to 37 | , |
| Akaushi | 9 (.15) or | -1.5 (.15) | 21 (.15) or | 40 (.15) | 26 | to 36 | I |
| Beefmaster | 5 (.15) or | -1.3 (.15) | 15 (.15) or | 31 (.15) | 7 | to 14 | |
| Brahman | | -1.0 (.15) | 10 (.15) or | 18 (.15) | 1 | to 11 | |
| Brangus (Black) | 6 (.15) or | -0.5 (.15) | 18 (.15) or | 34 (.15) | 5 | to 18 | |
| Red Brangus | 6 (.15) or | -0.1 (.15) | 12 (.15) or | 16 (.15) | 5 | to 14 | |
| Ultrablack | 6 (.15) or | -0.1 (.15) | 22 (.15) or | 46 (.15) | 5 | to 17 | |
| Braunvieh | 9 (.15) or | 0.6 (.15) | 38 (.15) or | 58 (.15) | 26 | to 46 | I |
| Charolais | 10 (.15) or | -2.2 (.15) | 19 (.15) or | 34 (.15) | 3 | to 23 | |
| Chiangus | 10 (.15) or | 1.0 (.15) | 36 (.15) or | 50 (.15) | 12 | to 27 | ' |
| Gelbvieh | 12 (.15) or | 0.0 (.15) | 59 (.15) or | 78 (.15) | 19 | to 42 | , |
| Gelbvieh Balancer | 14 (.15) or | -0.7 (.15) | 57 (.15) or | 84 (.15) | 15 | to 37 | ' |
| Hereford | 4.5 (.15) or | 2.0 (.15) | 43 (.15) or | 67 (.15) | 16 | to 37 | ' |
| Black Hereford | | 1.6 (.15) | 40 (.15) or | 67 (.15) | 20 | to 27 | ' |
| Limousin | 10 (.15) or | 0.5 (.15) | 55 (.15) or | 75 (.15) | 21 | to 38 | |
| Lim-Flex | 12 (.15) or | -0.1 (.15) | 58 (.15) or | 87 (.15) | 20 | to 36 | |
| Maine Anjou | 11 (.15) or | -1.0 (.15) | 41 (.15) or | 52 (.15) | 15 | to 32 | , |
| MaineTainer | 10 (.15) or | -0.3 (.15) | 39 (.15) or | 50 (.15) | 14 | to 27 | ' |
| Murray Grey | 0.3 (.15) or | 2.8 (.15) | 18 (.15) or | 28 (.15) | 2 | to 10 | |
| Red Angus | 7 (.15) or | -2.3 (.15) | 49 (.15) or | 73 (.15) | 14 | to 31 | |
| Salers | 0.6 (.15) or | 1.1 (.15) | 25 (.15) or | 51 (.15) | 10 | to 30 | |
| Santa Gertrudis | | -1.1 (.15) | -5 (.15) or | -7 (.15) | -3 | to 9 | |
| Senepol | | -0.5 (.15) | 2 (.15) or | 5 (.15) | -3 | to 15 | |
| Shorthorn | 11 (.15) or | -1.0 (.15) | 44 (.15) or | 48 (.15) | 10 | to 28 | |
| Simmental | 13 (.15) or | 0.4 (.15) | 54 (.15) or | 75 (.15) | 13 | to 33 | |
| SimGenetics | 13 (.15) or | 0.3 (.15) | 52 (.15) or | 74 (.15) | 12 | to 33 | |
| South Devon | 2.6 (.15) or | 0.4 (.15) | 24 (.15) or | 52 (.15) | 11 | to 33 | |
| Tarentaise | 3 (.15) or | 0 (.15) | -5 (.15) or | 1 (.15) | -4 | to 9 | |

Example: Does this Angus bull qualify? As which bull type?

CE = 9 (0.18 accuracy) BW = 2.9 (0.24 accuracy)

WW = 40 (0.21 accuracy)

continued

YW = 74 (0.05 accuracy)

Milk = 37

BALANCED Bull

Must meet or exceed EPD requirements for: Calving ease **and** Growth **and** Maternal Calving ease and Growth must have min. 0.15 accuracy

Calving Ease (CE)acceptablegreater than 5Birth Weight (BW)unacceptablegreater than 2.8

Calving ease category: acceptable meets CE requirement

** CE has accuracy value greater than 0.15 **

Weaning Weight (WW)unacceptablelower than 46Yearling Weight (YW)unacceptablelower than 75

Growth category: unacceptable meets neither WW or YW requirements

** Only WW has an accuracy value greater than 0.15 **

Milk acceptable falls between 15-37

Maternal category: acceptable meets Milk requirement (37 is max.)

This bull does not qualify as a "Balanced" bull: Growth category is unacceptable

TERMINAL Bull

Must meet or exceed EPD requirements for: Calving ease $\textit{and}\$ Growth only

Calving ease and Growth must have min. 0.15 accuracy

Calving Ease (CE)acceptablegreater than 0Birth Weight (BW)acceptablelower than 4.7

Calving ease category: acceptable meets both CE and BW requirements

** Both CE and BW have accuracy values greater than 0.15 **

Weaning Weight (WW) unacceptable lower than 53
Yearling Weight (YW) unacceptable lower than 93

Growth category: unacceptable meets neither WW or YW requirements

** Only WW has an accuracy value greater than 0.15 **

Milk not required for Terminal bulls

Maternal category: not a required category for Terminal bulls

This bull does <u>not</u> qualify as a "Terminal" bull: <u>Growth category is unacceptable</u>

CALVING EASE Bull

Must meet or exceed EPD requirements for: Calving ease *and* Growth *and* Maternal

Calving ease and Growth must have min. 0.15 accuracy

continued

Calving Ease (CE) acceptable equals 9

Birth Weight (BW) unacceptable greater than 1.4

Calving ease category: acceptable meets CE requirement

** Both CE and BW have accuracy values greater than 0.15 **

Weaning Weight (WW)unacceptablelower than 41Yearling Weight (YW)acceptablegreater than 70

YW accuracy unacceptable lower than 0.15

Growth category: unacceptable

** Only WW has an accuracy value greater than 0.15 **

If this bull has a 0.05 Accuracy for CE, BW, WW and YW: This bull does NOT qualify as a TAEP bull.

If registered bull has YW performance and contemporary data from NCE: YW = 75 (0.20 acc)

Weaning Weight (WW) unacceptable lower than 41
Yearling Weight (YW) acceptable greater than 70

YW accuracy acceptable YW meets EPD at acceptable accuracy

Growth category: acceptable meets YW requirement for both

EPD and accuracy

Milk acceptable falls between 15-37

Maternal category: acceptable meets Milk requirement (37 is max.)

This bull <u>does qualify</u> as a "Calving Ease" bull: <u>All 3 categories are acceptable</u>
This bull would be <u>reimbursed up to</u> a maximum of \$1,200.

If reg. bull has Genomic Enhanced EPDs and YW performance and contemporary data from NCE: YW = 75 (0.35 acc)

If this bull's <u>eligible EPDs</u> are <u>Genomic Enhanced</u>: This bull would be <u>reimbursed up to</u> a maximum of <u>\$1,600</u>.

TAEP: FY 2017/2018 Cattle Genetics Program - Minimum Dairy LNM or Index Requirements by Breed

<u>To Qualify:</u> A bull must meet or exceed the requirements in <u>1 of the 2</u> categories.

| BREED | <u>LNM</u> | or | <u>Index</u> | <u>Value</u> |
|-------------------|------------|----|--------------|--------------|
| HOLSTEIN | 308 | or | TPI | 1719 |
| Red & White | 308 | or | TPI | 1719 |
| AYRSHIRE | 223 | or | PTI | 83 |
| BROWN SWISS | 174 | or | PPR | 80 |
| GUERNSEY | 102 | or | PTI | 78 |
| JERSEY | 217 | or | JPI | 82 |
| MILKING SHORTHORN | 50 | | | |